The City of Dania Beach
Landscape Technical Manual

November 2010 Edition

This document was prepared for the City of Dania Beach by E Sciences, Incorporated, through a grant from the Florida Department of Agriculture and Consumer Services, Division of Forestry.

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1.0 INTRODUCTION

The City of Dania Beach values its urban landscape, a natural resource that provides aesthetic, cultural, health and safety benefits for its residents.

The City's landscape code is in place to protect and enhance the City's Urban Forest. It provides rules that govern the planting, maintenance and removal of trees and other landscape plants. Homeowners, residents, business owners and property managers must maintain their landscapes in accordance with the City code. Developers constructing new buildings must follow the City code to determine landscaping requirements. Tree maintenance and removal companies also have to follow the City code when conducting work on trees in the City.

This document was created to assist residents, property owners and managers, developers and tree care companies to understand the City code and to provide assistance for staying in compliance with City requirements and for maintaining a healthy, safe and attractive urban landscape.

This manual is designed to be used electronically for best results. Words appearing in blue with an underline are links to definitions or resources in the appendixes or outside references. The appendixes provide a list of definitions, resources and a bibliography of outside resources, enabling the manual to be used in hard-copy format as well.

This Landscape Technical Manual is incorporated by reference into the City code. This means that the guidance in this manual must be followed in order to maintain landscaped areas in compliance with the City's laws, to obtain tree removal licenses and obtain approval for landscape plans for new developments.

2.0 REMOVING TREES

Most privately owned residential or commercial properties in the City of Dania Beach have one or more trees. This document refers to both trees and palms as trees. The City's official definition of a tree is listed in **Appendix A**. The City of Dania Beach governs the protection of all trees within the City, both on public and private land. The City regulates the removal of trees through the Tree Removal License Process.

2.1 Who needs to apply for a Tree Removal License?

According to Article III, Sec. 26-13 of the Dania Beach City Code, anyone who wishes to remove a tree from their property needs to apply for a Tree Removal License.

2.2 What happens if I remove a tree without a Tree Removal License?

If you remove a tree without a valid Tree Removal License, you may be cited for a code violation. A code citation may require an "after the fact" Tree Removal License. An after the fact Tree Removal License will typically require double the standard permit fees and mitigation costs.

2.3 How do I know if a tree removal was authorized?

If you have reason to believe that tree removal activity is happening or has happened without proper authorization, you may notify the City's Code Compliance Unit at 954-924-6810 or online at http://www.ci.dania-beach.fl.us/ and selecting Online Services, then Online Forms.

2.4 I want to apply to remove a tree from my property. What is my first step?

For some common situations, the City has authorized **General Tree Rem oval Licenses**. These are licenses that apply to activities throughout the City. If your tree removal activity qualifies for a General Tree Removal License, you are only required to submit a General License Use Notice (**Appendix B**) to notify the City of your intent to remove trees, and there typically is no submittal or permit fee.

Activities qualifying for a General Tree Removal License are as follows:

- Removal of trees within wetlands in accordance with a Broward County Environmental Resource License
- Harvesting trees as part of licensed tree nursery operations (*submittal of a General License Use Notice is not required for this activity*)
- Removal of a hazardous tree
- Removal of trees *by government entities* after a natural disaster
- Removal of trees by private citizens after a natural disaster, *if the City Manager provides authorization*. After a storm event, call the Community Development Department at 954-924-6805 to verify if the City Manager has provided this authorization.
- Removal of trees on owner-occupied single family or duplex residential properties, **except:**
    - Removal of specimen trees
    - Removal of trees that have been cited for code compliance violations
    - Removal of trees that have been planted as a requirement of a Tree Removal License
    - Removal of Trees that have been planted as part of an approved landscape plan.

      To identify whether your property contains trees planted as a requirement of a Tree Removal License or approved landscape plan, contact the City's Community Development Department at 954-924-6805.
- Removal of trees by a utility company within their recorded utility easement
- Removal of trees by a water management district within a canal or lake maintenance easement
- Removal of trees by City, county or state agencies on road rights of way
- Removal of invasive species

2.5 What if I do not qualify for a General Tree Removal License?

In general, the City does not allow trees removed from any property unless the tree is dead, a hazard, causing problems to roads, structures or utilities, is an exotic-invasive species or must be removed to accommodate a permitted development activity. If you feel there is a valid reason why a tree must be removed from its current location, you must first:

- Identify the reason for removal
- Consider alternatives to removing the tree including pruning, to remove hazardous branches, treating pests and providing irrigation and fertilizer
- Evaluate whether the tree can be relocated to another place on the property or another site within the City
- Determine if development activities proposed for the property can be moved or designed in such a way to allow the tree to remain

If you need help in determining whether a tree can be saved or relocated, consult with an arborist certified by the International Society of Arboriculture. To find a local tree care company, consult the local landscape professionals list in **Appendix C** , or one of the other professional listing services identified in **Appendix D**.

If you cannot relocate a tree and believe your tree must be removed, you may submit a Tree Removal License Application (**Appendix B**) to the Community Development Department to obtain authorization to remove your tree.

2.6 What if I decide to relocate a tree?

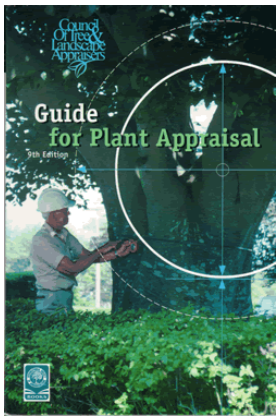
If you decide to relocate your tree, you will still need a Tree Removal License, however your fees may be lower than if you removed the tree and you will not be required to plant other replacement trees (unless the tree you relocate later dies).

There are many factors to consider when thinking about relocating a tree. Some trees may not be good candidates for relocation because of their size, species health, structure or other reasons. The time of year you move the tree, where you move the tree to and how you care for the tree after it is relocated will affect how well the tree survives. Consulting a Certified Arborist is the best way to make sure your tree will survive relocation. To find a local arborist, consult the local landscape professionals list in **Appendix C**, or one of the other professional listing services identified in **Appendix D**.

The Tree Removal License Application, provided in **Appendix B** , indicates the requirements for authorization to relocate a tree.

2.7 How much does it cost to obtain a Tree Removal License?

When you submit your application, you will be charged a submittal fee. An additional tree removal fee will be charged for each tree that is authorized for removal. Payment of the tree removal fee will be required when the License is issued. Application submittal and license fees are provided in **Appendix B**. If you are requesting to remove a specimen tree, you may need to pay an additional specimen tree removal fee. Specimen trees are considered to be a valuable resource for the City and therefore removal of specimen trees requires payment of a fee, based on the tree's estimated value, into the City's Tree Fund. For information on determining the value of specimen trees, consult a Certified Arborist. **Appendix B** of this manual contains a table designed to help estimate specimen tree values. The City Arborist will help applicants for owner-occupied single family and duplex homes to determine the value of specimen trees on their property if requested, however these applicants



may also use the services of a private arborist if they choose. All other applicants should obtain the services of an arborist to determine specimen tree values.

2.8 What happens after I apply for a Tree Removal License?

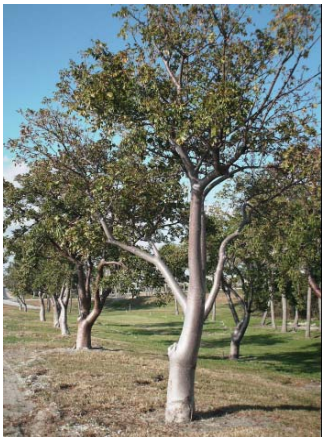
The City will review the application and coordinate with the applicant to visit the property. Depending on the situation, the City will issue the License, request more information or decide not to approve the Tree Removal License.

2.9 How long does the Tree Removal License process take?

While some applications make take longer or shorter, the average application is processed and issued within ten (10) days.

2.10 Will I be required to replace the trees I remove?

In most cases, the Tree Removal License will require you to plant replacement trees as a condition of removing the existing trees. Replacement requirements are based on the size of the canopy of the tree that is removed. For every 300 square feet of canopy coverage, one shade tree (large tree) is required for replacement. Smaller replacement trees will count for less replacement canopy area. Consult the Canopy Replacement Table in **Appendix E** to determine how many replacement trees are needed for your situation. The City Arborist will help applicants for owner-occupied single family and duplex homes to determine the size of tree canopies proposed for removal. All other applicants should obtain the services of a tree professional.



2.11 Do I still have to plant replacements if I already have a lot of other trees?

Existing trees do not reduce the requirements for tree replacement. However, if sufficient space is not available to accommodate required replacement trees, payment into the City's Tree Trust Fund in lieu of tree planting may be accepted. The amount of the payment is determined by the cost for the City to purchase, install and maintain a tree elsewhere in the City to compensate for removal of the tree canopy on your property. A guide for determining this fee is included in **Appendix E**.

2.12 What trees can I use as replacement trees?

An approved License will provide a list of approved replacement species and sizes based on the location and conditions of your property. An applicant may request approval for substitution of an equivalent tree(s) of his/ her choosing *prior to planting* by contacting the City Arborist at 954-924-6805.

The Dania Beach Recommended Tree List (**Appendix F**) can assist you in selecting your own tree based on the planting site, property location and other factors. Links and references to additional species selection resources are included in **Appendix D**.

Replacement trees must be of a high quality in both structure and health. This will reduce the risk of the tree becoming a hazard or maintenance problem in the future and will benefit both the property owner and the City in general. Most nurseries have high quality trees in stock because there are regulations and specific guidelines used to ensure that quality trees are used in all new developments. Ask the nursery for a tree that is Florida Grade 1 or better – if it is not, the City will not accept the tree, and a new one will have to be planted. Consult **Appendix D** to locate resources for determining the grade of landscape trees.

2.13 How large are replacement trees required to be?

Replacement trees are required to be at least 10 feet tall with a two inch caliper (diameter at the base of the tree). Note that most home improvement stores that sell trees typically do not sell trees this large. Instead, a plant nursery should be used to obtain replacement trees. A list of local area nurseries is included in **Appendix C**. Trees below the minimum size may not be accepted and a new replacement tree may be required to be planted.

2.14 Where should I plant the replacement tree(s)?

Replacement tree(s) must be planted in the same general location from which the original tree(s) were removed unless there is valid reason for the tree(s) to be planted elsewhere on the property. Inform the City of your wish to plant the replacement tree(s) somewhere else when you apply for the Tree Removal License and the City Arborist will discuss potential planting locations with you.

2.15 What is the proper way to plant a tree?

The way that a tree is planted will directly affect how long a tree will live and how healthy it will be. Details showing proper tree planting are provided in **Appendix G** and a list of other resources on proper tree planting is provided in **Appendix D**.

2.16 What it I cannot afford a new tree?

Removal and replacement of trees can run from the hundreds to the thousands of dollars, so careful planning is recommended. If you are unsure of costs, get a price quote from a local tree company prior to submitting an application and prior to cutting a tree – if you remove a tree, you will be required to plant your replacement trees regardless of your financial situation. However, you may be eligible to have a tree from the City Nursery installed on the City-owned swale in front of your property, free of charge, as a replacement for a tree that you would like to remove. You can apply to the City using the Landscape Maintenance Agreement form found in **Appendix B** or at City Hall. Ask the City Arborist if this is a viable option during your tree removal application process.

2.17 I removed/relocated/replanted my trees as authorized. Now what?

The City's landscape and code enforcement staff will conduct follow-up site inspections. If you have completed the activities required in your application in the time allotted, no further action is required.

2.18 How can I change or amend my tree removal license?

If you were required to obtain a tree removal license as a result of a code enforcement action, you are required to conduct the activities covered in the tree removal license, in the time allotted. Contact the code enforcement officer listed on your original citation at 954-924-6810 to coordinate requests for changes. If you obtained a tree removal license voluntarily, you may call the City Arborist at 954-924-6805 to request to withdraw or change your application.

3.0 PROPER TREE MAINTENANCE AND CARE

In urban areas, practices such as pruning, fertilizing and providing irrigation for trees can help them live longer, stay healthier and keep a shape that is aesthetically pleasing, accommodating to infrastructure and buildings and structurally sound.

However, improper tree care can cause a rapid decline in tree health or even death of a tree, as well as create safety hazards and an unsightly landscape.

Because of the above factors, the City of Dania Beach regulates tree maintenance activities. This section of the Landscape Manual identifies the minimum code requirements and potential tree maintenance code violations, and provides recommendations for proper tree care.

3.1 What is tree abuse?

Tree abuse is a general term used to refer to improper tree care that may result in damage to the tree and/or safety hazards. Following are descriptions of common types of tree abuse.

Pruning that does not confirm to industry standards is considered improper pruning and is considered tree abuse. These standards are published by the American National Standards Institute (ANSI) as the ANSI A-300 standards (**Appendix D**).

In general, cutting a tree in a way that destroys the natural form of growth is considered tree abuse. Experienced tree trimmers that are licensed by Broward County are capable of making reductions in tree height, spread or increasing clearance.

Examples of improper pruning are covered in the following paragraphs

One type of improper pruning is stub-cutting. Cutting a stem between branches or nodes as shown in **Figure 1** creates opens the tree up to disease and encourages sprouting – where small branches grow quickly from a cut. These branches soon become large and heavy, but are poorly attached to the tree and will easily fall in windy situations.

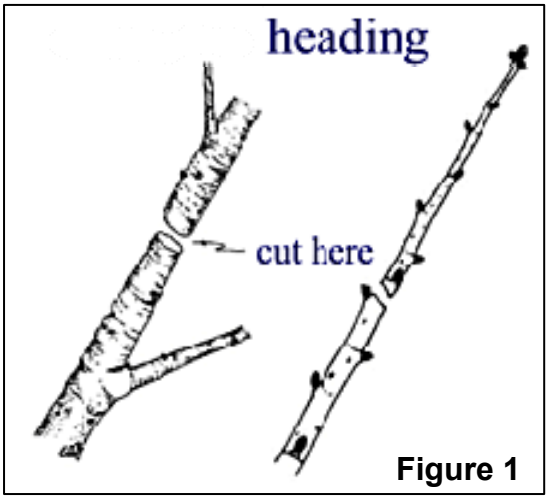


Figure 1

When a number of limbs are stub cut it is considered *heading*, *topping* or *hat-racking* a tree. **Figure 2** shows a hat-racked tree. These trees may decline or even die because of the damage, and due to the number of sprouts that will arise from the tree and become a hazard, most hatracked trees are required to be removed.

Figure 2

Flush cuts are made when a branch is cut "flush" or right next to the trunk. This type of cut injures the trunk and opens it up to disease and decay.

Over-lifting or lion-tailing are other improper pruning techniques that used to be common practice. Previously, tree care professionals thought that removing leaves from the interior of the tree would allow wind to blow through the tree branches easier during wind storms. However, research has shown that keeping leaves only at the end of a branch makes the branch act like a see-saw, swinging quickly back and forth and increasing the likelihood of it breaking .

Over-pruning a palm is also considered tree abuse and can damage the palm and make it more susceptible to disease or wind damage. In general, palms do not need to be pruned for any reason other than aesthetics. Palm fronds should not be removed unless they are brown and hanging lower than a 90-degree angle to the trunk. Removing too many palm fronds as show in **Figure 3** can cause a weak spot in the trunk, increasing the likelihood of the palm being destroyed or breaking in half during a windstorm.

Figure 3

3.2 Where can I find information about pruning trees?

Hiring a professional is required for tree trimming for all trees except trees with a six inch diameter or less on owner-occupied single family and duplex homes. Owners of single-family or duplex homes may trim their own trees with diameters of six inches or less. If you wish to prune your own trees there are plenty of resources available to assist you, which include *An Illustrated Guide to Pruning* by Edward Gilman. These resources are listed in **Appendix D**.

3.3 How do I find qualified tree trimmers?

Other than the owner of a single or double family home pruning trees on his/ her own property, anyone who is trimming trees in the City of Dania Beach must be both registered with the City and must have a current Broward County Tree Trimmers License. Consult **Appendix C** for a list of tree maintenance firms registered with the City. Be sure to ask to see that the company has a valid Broward County Tree Trimmers License.

The City recommends hiring an International Society of Arboriculture (ISA) Certified Arborist to maintain your trees. A Certified Arborist is someone who has reached a level of experience in many aspects of the field of tree care. Since the ISA requires a Certified Arborist to engage in continuing education, a Certified Arborist is likely to be current on new techniques and knowledge. A Certified Arborist has broad knowledge of trees and tree care and can provide services beyond just tree trimming, such as the diagnosis and care for diseased or damaged trees or consultation on fertilization or irrigation needs.

To verify whether an individual is an ISA Certified Arborist, you can check on the ISA's website at: http://www.isa-arbor.com/findArborist/findarborist.aspx

3.4 Tree abuse other than pruning

In addition to improper pruning, any other cutting upon a tree which destroys its natural habit or growth is considered tree abuse. This includes peeling bark off of trees or damaging roots.

Neglecting a specimen tree is also considered tree abuse. Therefore, treating insect infestations, providing proper irrigation and fertilizer and routine pruning are all required for specimen trees.

Keep in mind that any activity, which causes the unnatural decline or death of a tree without a valid tree removal license is a violation of the City's code regardless of whether it constitutes tree abuse. Causing the unnatural decline or death of a tree without a tree removal license may require an after-the-fact tree removal permit which is subject to a doubling of fees.

3.5 Is topiary tree abuse?

Topiary is allowed on owner-occupied properties for detached or duplex usage. Topiary is also acceptable on properties with approved landscape plans if the topiary trees are not used to meet landscape requirements and are identified on landscape plans as topiary trees.

Topiary is not permitted on swale trees or trees in other rights of way or road easements.

3.6 Yard maintenance and xeriscaping

In addition to regulations governing trees, the City of Dania Beach regulates the general maintenance of landscape areas on all properties in order to provide a safe and aesthetically pleasing environment for all City residents.

Xeriscaping, the practice of reducing irrigation needs through landscape planning, is encouraged by the City. Landscapes following xeriscaping principles must still comply with the minimum standards of the code.

The following landscape maintenance standards are provided for maintaining compliance with the City code.

- Swale areas must be maintained in vegetative cover unless the Director of Public Services provides a site-specific exception
- Yards by default must have vegetation that is properly maintained and provides 100% coverage for the portions of the yard within public view.
- If a homeowner wishes to have non-vegetative material in their yard within public view, the following shall apply:
    - Non-vegetative material must have a specific use for which they are intended, which either precludes or severely restricts the use of or ability to maintain vegetation in that area.
      Generally suitable uses: walkways, flower beds, mulch rings around trees, playground areas.
      Unsuitable uses: using non-vegetative material to cover the entire yard and oversized non-vegetative areas for their intended or actual use.
    - Non-vegetative material must be in a *clearly defined* area. The edge of areas with non-vegetated material should have a structural border or other means to show a physical boundary between non-vegetated and vegetated areas.
      Generally suitable examples: mulched flower beds with plastic or stone edging, stone walkways, playground with sand confined in a border. An example of a suitable non-structural boundary could be a raised mulch bed adjacent to a lawn, where an edging tool is used to make a defined border between the two.
      Unsuitable examples: whenever there is an overlap of vegetative and non-vegetative cover such that vegetation (other than specifically planted trees, shrubs and flowers) is growing through the non-vegetative cover. Examples: grass growing in a mulch bed, stone from a driveway or walkway located within vegetated areas.
- Public right-of-way swales: Swales must be maintained with vegetative cover unless the Director of Public Services reviews and accepts an alternative for a specific property.
- Properties with approved landscape plans: If a property is covered by an approved landscape plan, the landscaping prescribed by the landscape plan shall be followed. Minor deviations from the landscape plan (substitution of one tree for an equivalent species) may be accommodated

by informal approval from the Community Development Department. In order to substantially deviate from the approved landscape plan, a modification to the landscape plan must be submitted and approved.

Properties with any non-conforming areas may be cited for code violation.
Properties with 1/3 or greater of the visible yard in non-conformance may be cited as being a “blighting influence.”

4.0 LANDSCAPE PLAN SUBMITTALS

The purpose of this section of the landscape manual is to make the Landscape Plan Approval Process more efficient for both the City and for applicants proposing new developments in the City. This section provides explanations of the landscape requirements for new developments, along with examples of preferred format and standard text and drawings for landscape plans.

4.1 Required components of a landscape plan

The City of Dania Beach Landscape Code provides basic information about what is expected in a landscape plan. This manual describes the format and presentation of the required information that is preferred by the City.

The main plan sheets required for a complete Landscape Plan are as follows:

- Tree Survey
- Landscape Design
- Landscape Notes and Details
- Irrigation Plan

4.2 Tree survey

A submitted landscape plan must include a current tree survey that includes the following information:

- Plan view of the site at a scale with one inch equaling no more than 200 feet, showing:
  - Property boundaries
  - Zoning of adjacent properties
  - North arrow
  - Scale
  - Legend
  - Date of survey
  - Statement “No trees on or adjacent to property” if none exist
  - Existing trees, each with a unique number, including trees within 25 feet outside of the property boundaries
  - Existing site improvements (buildings, paving, etc.)
- Existing tree table with the following information:
  - Tree number corresponding to the numbered trees on the plan view
  - Common and scientific species name of each tree
  - Diameter at breast height in accordance with the definition in the code
  - Canopy cover in square feet
  - Tree condition
  - Proposed disposition (remain, relocate or remove)

- Dollar value of specimen trees

In order to facilitate creation of the existing tree table, a standard Dania Beach Existing Tree Table has been created and is included in **Appendix E**. While use of this standard table is not required, inclusion of this table on your Tree Survey will help to ensure that the correct information is being provided to the City, and provided in a format that the City is accustomed to and can quickly and easily review.

Common Mistakes
Avoid the following common mistakes to keep your plan review and acceptance on schedule:

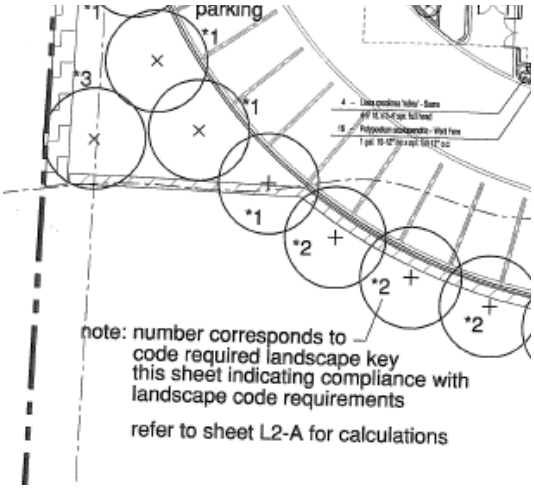
- Improperly identified trees
- Missing information in the existing tree table
- Improperly calculated specimen tree values
- Trees within 25 feet of property line not shown
- Statement of "No trees on or adjacent to property" not included when applicable
- Old survey used indicating trees no longer on property

4.3 Landscape design sheets

Landscape design sheets should depict all proposed landscaping in accordance with the following guidelines:

- Be at the same scale as site plan sheets unless a larger scale is required to show planting detail.
- Depict any existing trees and indicate whether they are to be removed, relocated or preserved
- Show proposed site improvements including paving, grading and structures
- Show all proposed plantings, include:
  - Number or symbol corresponding to planting requirement the planting is being used to fulfill (**Figure 4**)
  - Number of plants for shrubs and herbaceous plantings shown in groups
  - Proposed trees should be depicted at their estimated size five years after planting
- Include a planting table that lists all proposed plantings including species, size, spacing, native status and quantity, as well as other pertinent information as applicable such as drought tolerance
- Location of specific tree preservation practices including root barriers, root pruning and temporary irrigation

Figure 4
In this example, the designer used a number with an asterisk to indicate which code requirement he was meeting with each tree. Even though the trees are part of a curved row, some of the trees are being used as perimeter trees and others are being used as non-vehicular use area landscaping. Without the numbers, it would be hard to identify which trees are being used for each.



Multiple sheets may be used to indicate proposed landscape plantings, but only one planting table should be provided.

An additional sheet(s), at the same scale as the proposed landscape planting sheet(s) should be provided to indicate the landscape areas attributed towards the various landscape requirements (vehicular use landscape area, perimeter buffer, etc.). This should be done by shading each landscape area and indicating the area in square feet for each contiguous landscape unit, as well as providing a table depicting the totals for each type of landscape area. For example, hatch all vehicular use landscape areas and crosshatch all perimeter buffer areas, as shown in **Figure 5**.

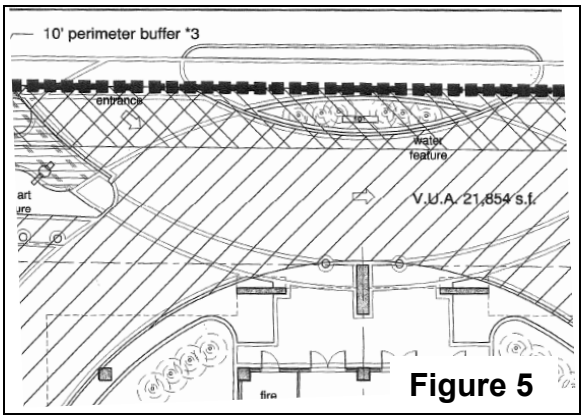


Figure 5

Include area measurements for the total property area, pervious and non-pervious surfaces, total vehicular use area, and for each landscape area by type (perimeter buffer, vehicular use and non-vehicular use). Be sure that these areas meet the minimum requirements of the code.

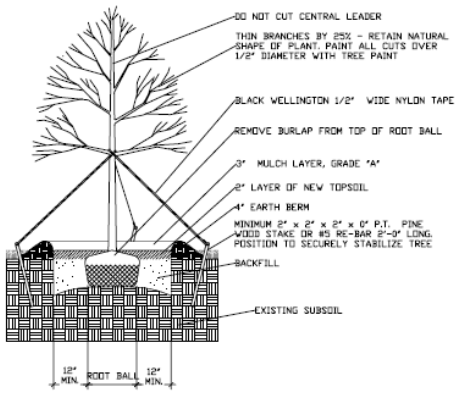
Common Mistakes
These mistakes often add time to the review process and may require substantial redesign or work to address requests for additional information:

- Proposed landscaping not labeled to indicate which requirement it satisfies
- Quantities and/or species in plant list do not match those shown on plan view
- Existing tree locations not shown

- Sheet depicting landscape areas with hatching is at a different scale than planting plan
- Landscape calculations not provided for all landscape requirements
- Inadequate space provided for shade trees
- Failure to provide three palms for each tree equivalent required
- Specifying Category 2 invasive species for use in landscaping. Consult **Appendix D** for references on invasive species status.

4.4 Landscape notes and details

Planting specifications, notes and details are necessary to help ensure that the landscaping is installed in the field the way it is designed, contractors have accurate information for bids and landscape installation that follows the specifications can easily pass inspection.



LARGE TREE PLANTING DETAIL

To help facilitate consistent installation of landscaping and quicker review of landscape plans, the City of Dania Beach has prepared Standard Landscape Notes and details (**Appendix G**). The standard notes should be included on each landscape plan. The notes may be added to but should not be modified unless modifications have been previously provided and agreed to by the City. Standard details should be used as applicable for each landscape plan. Details other than standard details should only be used if the standard City details do not address the specific activity.

4.5 Irrigation plan

The irrigation plan sheets(s) for the project must follow these standards:

- Have a maximum scale of one inch equaling 30 feet
- Depict the location of existing site improvements and landscaping to remain
- Depict the location of proposed site improvements and landscaping
- Show the water main locations, size and specifications,
- Show the valve locations, size and specifications,
- Show pump locations, size and specifications and water source.
- Show backflow prevention device type and specifications.
- Provide standard irrigation notes (listed in **Appendix G**),
- Provide a zone layout plan with a minimum scale of one inch equals 20 feet and that includes head type, specifications and spacing.

- Indicate on the zone layout plan the xeriscape methods applied in your project including rain sensing devices, use of nonpotable water, minimization of application to impervious areas and utilization of irrigation zones in accordance with landscape needs.
- Indicate proposed landscaping on the zone layout plan.

In addition to the above plan components, the irrigation system must meet the following requirements

- All irrigation systems shall be designed to have a minimum of one hundred (100)
  percent coverage with a fifty (50) percent overlap.
- Drip, trickle or other nonvisible irrigation systems are permitted.
  areas.
- Controlled irrigation systems shall be operated by an irrigation controller capable of irrigating high demand areas on a different schedule from low water demand areas. The controller shall utilize rain sensors to override the irrigation cycle of the sprinkler system when rainfall exceeds the application rate.
- Use of non-potable water where available.
- Water shall not be applied more frequently than every other day and shall not
  exceed two (2) inches total per week unless restricted by the city commission or the South Florida Water Management District to a greater extent. Hours of operation of irrigation systems shall be between the hours of 5:00 p.m. to 8:00 a.m. unless stricter hours of operation are set by the South Florida Water Management District or the City commission. Exemptions from the irrigation hour restrictions are as follows:

a. Irrigation using a micro-irrigation or drip irrigation system.
b. Irrigation of new landscaping for a thirty (30) day establishment period.
c. Watering in of chemicals, including insecticides, pesticides, fertilizers, fungicides, and herbicides when required by law, recommended by the manufacturer, or constituting best management practices.
d. Maintenance and repair of irrigation systems.
e. Irrigation using low volume hand watering, including watering by one (1) hose attended by one (1) person, fitted with a self-canceling or automatic shutoff nozzle or both.

4.6 Overall landscape design principals for new developments

The City of Dania Beach has three main objectives for landscaping for new developments that will guide comments during the landscape plan review process. These objectives consist of: aesthetic enhancement, environmental conservation and facilitating long-term maintenance. To help applicants meet these objectives, a Recommended Tree List (**Appendix F**) has been developed by the City that identifies species that are known to have worked well on past projects for specific uses. Other species selection resources including the FP&L guide for trees near utility lines (Right Tree Right Place) and the University of Florida Tree Selector are listed in **Appendix D**.

Aesthetic Enhancement

In order to achieve the overall appearance of a "green" city, along with accompanied higher property values, higher sales volume and potential profit from commercial properties and higher quality of life, Dania Beach is seeking to enhance the visual appeal of new development projects in the following ways.

Screening

Perimeter buffer requirements are in place in the City Code to buffer each property from one another and especially to moderate the affects of commercial and industrial land uses on abutting residential properties. To this end, perimeter landscaping should seek to screen the view of buildings from casual pedestrian observers outside of the property boundary. Accordingly, choice of landscape vegetation used for perimeter buffer landscaping should have components that have full canopies at low heights, wide canopy spread and high visual appeal. In order to maintain public awareness of businesses present on commercial properties, buffer landscaping may be placed behind or used as accents for street signage as well as being pulled back from vehicular entranceways. However, allowing clear and unobstructed views of buildings themselves is not a priority.

Canopy Cover

The City is seeking to achieve a high level of canopy cover including over impervious surfaces. Use of shade trees, with adequate planting space, will be required where possible. Planting plans should seek to maximize canopy cover, especially over parking areas.

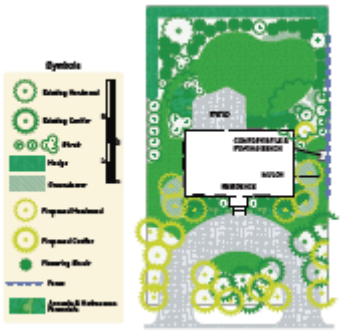
Basic Aesthetic Principles

While there is no formula for aesthetics, certain principles of design will help to enhance landscape plantings including use of odd numbers of trees in clusters, offsetting trees in rows to provide depth, using complimentary colors in flowering plants and providing complimentary variations in plant height.

Environmental Conservation

Xeriscaping

The principles of xeriscaping must be applied in all new developments. Some basic ways to accomplish this are listed below:



- Plants must be grouped with those of similar water needs.
- Irrigation design should be applied accordingly, with zones created for each area of differing water needs. Irrigation in zones that include plants with lower water requirements should be designed to be run less frequently.
- The irrigation system for a proposed project should not be designed such that water is being applied where it is not needed (such as to an impervious surface or a detention pond).

More innovative approaches, such as the use of grey water, rain water or other non-potable water sources for irrigation will be encouraged.

A landscape plan which incorporates principles of xeriscaping may reduce the coverage and overlap requirements. The applicant may request this reduction by proposing an alternative irrigation coverage and overlap, along with justification for the new proposed levels of irrigation.

To learn more about xeriscaping, please consult **Appendix D** for related resources on designing and planting using xeriscape principles.

Conservation of Mature Trees

Mature trees typically help to prevent soil erosion, provide wildlife habitat, provide shade, sequester carbon dioxide and provide aesthetic appeal in greater levels than do smaller, younger trees. In addition, the mature tree canopy of the City lends it a unique character that cannot be instantly replaced with new plantings.

Accordingly, preservation of mature trees is a high priority for the City and new developments will be expected to retain existing trees in place where possible and to relocate healthy mature trees when preservation in place is not practicable. Initial site designs and planning must therefore take into account existing healthy mature trees and incorporate them into site design.

A key factor of successfully retaining mature trees on a new development is use of conservation practices during construction. **Appendix G** provides construction details for tree preservation including specialized paving near existing trees, protection fencing, temporary irrigation and standard notes.

Use of Native and Diverse Site-Appropriate Species
A minimum of 50 percent of trees and 50 percent of shrubs proposed as part of a landscape plan must be native species. This rule is not meant to imply that all introduced species are bad. There are many introduced species used in South Florida that are beautiful and practical. Some are very drought and wind resistant. Some require little maintenance and add effect to a landscape that may not be possible with all native plants.

However there are also many benefits to using native species. The use of native species helps to provide a viable long-term forest resource, wildlife habitat and may reduce irrigation needs. Native species also lend a local character to landscape projects that help to give a unique look and feel to the area.

Use of a diverse mix of species is also encouraged on each project. Sites with limited species diversity are susceptible to catastrophic losses due to diseases, insect infestations or similar occurrences that target a specific species. Additionally, a diverse mix of species provides for a wider variety of wildlife benefits. Use of diverse plantings and regionally underutilized species is therefore encouraged.

Maintenance
After a new development is constructed, maintenance of the site begins and will last the life of the site. Future changes in landscape design may require amendments to approved landscape plans and tree removal licenses. Accordingly, maintenance costs can far outweigh initial planting costs if sites are not properly designed and planted.

Accommodating Infrastructure
Utilities and site amenities such as fire hydrants, water meters and water lines must be placed a minimum of 15 feet from trees proposed to be retained or planted, and landscaping must be designed to allow access and maintenance of these infrastructure components. In constrained areas where infrastructure components occur in designated or required landscape areas and they cannot be relocated, standard landscaping levels must still be provided and should be accommodated as close to the original site as possible. Infrastructure with cement pads or other footers must not be included as landscape area for calculations.

Maintenance of Landscaping
In addition to maintaining infrastructure free from vegetative intrusion, landscape vegetation itself must be maintained. Therefore sites should be designed to minimize landscaping maintenance requirements and problems including:

- Limiting use of vegetation with known intensive maintenance requirements including fertilizer, insect control, irrigation and pruning
- Avoid use of plants with heavy or messy fruit over pedestrian access areas

- Avoid use of plants that will quickly outgrow their allocated planting space and will require frequent pruning

4.7 Basic landscape requirements

There are a variety of landscape requirements that each site must meet, dependent upon the proposed project, the size of the property, the location of the project and the surrounding land uses. The following sections will give you tips on meeting the code requirements for your landscape design plan.

4.8 Species selection

Native Plants

Half of the trees and half of the shrubs proposed as part of a landscape plan must be native plants. Retained existing plants that will be counted toward landscape requirements (perimeter buffer, vehicular use area landscaping, etc.) may count toward meeting this requirement.

Invasive Species

The City prohibits planting of Category 1 invasive species within City limits. Planting of Category 2 invasive species is allowed, but these plants may not be used to fulfill landscape or tree replacement requirements. **Appendix D** provides a link to the list of invasive species.

4.9 Perimeter buffers for vehicular use areas

The code requires landscape buffers around parking, roadway and other vehicular use areas (VUAs). Underground parking and enclosed parking decks are exempt from this requirement. Vehicular use areas that are *entirely* blocked from view from the adjacent property do not require landscape buffers. The following table indicates the buffer requirements for the various property scenarios identified in the code:

Table 1. Perimeter Buffer Requirements for VUAs

Property Type	Buffer r equirements fo r VU As abutting public right of way	Buffer requirements for VUAs abutting another property
Multi-family residential	10 feet in depth with 1 tree for every 30 linear feet and a continuous hedge that is not closer to the VUA than 5 feet. A wall 3 to 5 feet tall can replace the hedge.	5 feet in depth with 1 tree for every 40 linear feet and a continuous hedge that is not closer to the VUA than 5 feet. A wall 3 to 5 feet tall can replace the hedge. Shrubs or vines must be placed every four feet on both sides of the wall.

Business, commercial or industrial	5 feet in depth with 1 tree for every 40 linear feet and a continuous hedge that is not closer to the VUA than 5 feet. A wall 3 to 5 feet tall can replace the hedge. Shrubs or vines must be placed every four feet on both sides of the wall.	5 feet in depth with 1 tree for every 40 linear feet and a continuous hedge that is not closer to the VUA than 5 feet. A wall 3 to 5 feet tall can replace the hedge. Shrubs or vines must be placed every four feet on both sides of the wall.

Notes:

- If the VUA is along a property perimeter, one buffer area may be utilized as both a VUA and perimeter buffer provided that all of the requirements for both buffers are met.
- An additional buffer tree is required for remaining fractions above the linear foot requirement. Example: a VUA buffer for a commercial property is 70 linear feet, therefore two perimeter buffer trees are required.

4.10 Interior landscaping for vehicular use areas

In addition to vehicular use area buffers and perimeter buffers, a vehicular use landscape area or group of landscape areas is required which equals at least 20 percent of the total vehicular use area. Landscaped parking lot peninsulas and medians (such as the one depicted on the right) are examples of interior landscaping. Wheel stops or curbs are required to protect the landscaped areas from vehicle encroachment.

<u>Intermediate parking area peninsulas</u>

The standard requirement is that no more than 12 parking stalls can be put into a row without a landscape peninsula that is at least eight feet wide by 15 feet long.

Each landscape peninsula must have at least two Category 2 or Category 3 trees, or one Category 1 tree, provided that the peninsula width is a minimum of 10 feet wide.

Allowance for additional spacing

The spacing between parking area peninsulas can be increased to allow up to 20 parking stalls between peninsulas, provided that the width of one of the adjacent landscape peninsulas is a minimum of 10 feet plus one foot for each parking space over fifteen. These larger landscape peninsulas must contain a minimum of two Category 1 trees.

Alternative method
Intermediate peninsulas are not required when parking aisles are separated from adjacent uses (including additional parking) by a continuous landscape strip a minimum of 15 feet wide with a minimum of one Category 1 tree per 12 parking stalls.

Benefit for using pervious pavers
Parking stalls with pervious pavers that have a vegetative cover may each be counted as ¾ of a parking stall for the requirements of this subsection.

Terminal parking area peninsulas
In addition to intermediate peninsulas, terminal landscape peninsulas or landscape areas shall be included at each end of every parking row. These terminal landscape areas shall be a minimum of 10 feet wide, at least as long as the parking stalls in the aisle, and contain at least two Category 1 trees.

For head-to-head parking rows, one terminal parking peninsula/equivalent landscape area is required for each row.

Landscaping for vehicular use areas abutting buildings
Landscape areas are required to separate VUAs from abutting buildings, in accordance with the following criteria:

- A minimum width of five feet shall separate VUAs from the walls of a single story building.
- The minimum landscape area width shall increase by five feet for each additional story, up to a maximum requirement of 25 feet.
- The landscape area shall be designed to accommodate pedestrian access.
- This landscape area does not apply to openings for garages, carports, loading docks or similar areas.
- This landscape requirement does not apply to parking garages or to special vehicular use areas which are not accessible for general vehicular use such as storage areas and trucking terminals.

Other vehicular use landscape areas
VUA landscaping other than the areas described above must be a minimum of five feet wide and 100 square feet. These areas must contain a minimum of one tree for each 200 square feet or fraction thereof.

Notes:

- If wheel stops are used to separate landscape areas from VUAs, they must be located a minimum of two feet from the landscape area.
- If curbs are used to separate landscape areas from VUAs, they are not counted toward the area or width requirements of the landscape areas.

- Every effort should be made to locate utilities and structures outside of parking peninsulas. If infrastructure is located within parking peninsulas and cannot be relocated, the required landscaping must be accommodated in another landscape area as close to the original location as possible.
- Landscape areas separating VUAs from abutting buildings may be included as part of the overall Interior Vehicular Use Landscaping (i.e. these areas count toward meeting the 20% area requirement).
- One tree is required per 200 square feet of vehicular use area landscaping, *exclusive of parking area peninsulas*, i.e. subtract the area of the parking lot peninsulas from your total VUA landscaping, then divide by 200 to determine the minimum trees required. These trees may be distributed throughout the VUA landscaping to best suit the property.

4.11 Perimeter buffer landscaping

For business, commercial, industrial or multi-family residential properties, the City of Dania Beach requires a perimeter landscape buffer along each side of a new development. These buffers generally consist of a hedge row and a certain number of trees per linear feet. In most cases, the City prefers these trees to be Category 1 shade trees, unless that section of the perimeter is under a utility line or another impediment. Specific landscape requirements vary depending on the property type and adjacent properties. The table below will help you to determine the number of trees and the depth of buffer that are required.

Table 2. Perimeter Buffer Landscaping Requirements

Property Type (zoned)	Landscape requirements when abutting open public land (alley, canal. etc) across from a residential property	Landscape requirements when directly abutting residential property	Landscape requirements when abutting business, commercial, industrial, roadway or other uses	Landscape requirements when abutting public streets **	Landscape requirements when abutting trafficways as designated on the Broward County Trafficway Plan located outside the local activity center boundary
Business, commercial or industrial	10 feet in depth, 1 tree and 10 shrubs per 2,000 square feet	10 feet in depth with a six-foot masonry wall or solid wooden fence, set back five feet from the residential property. One tree per 40 lf one shrub per three linear feet must be installed between the wall/fence and	5 feet in depth with 1 tree for every 40 lf and a row of hedges.	10 feet in depth with 1 tree for every 40 lf and a row of hedges.	No special requirement, use most restrictive of other requirements

		the residential property, and a second row of trees (1/40 lf) installed on the opposite side of the wall.*			
Residential	5 feet in depth with 1 tree for every 30 lf and a hedge row. No walls or fences.	5 feet with 1 tree for every 30 feet and hedge row. No walls or fences.	5 feet with 1 tree for every 30 feet and hedge row. No walls or fences.	10 feet in depth with 1 tree for every 30 lf and a hedge row. No walls or fences.	15 feet in depth with 1 tree for every 30 feet and a hedge row. No walls or fences.

* In some cases, the community development director may allow an alternative wall or fence material, use of an existing wall on an abutting property, an increase in wall or fence height up to 8 feet, or the placement of the wall or fence immediately adjacent to the residential property. In this last case, a double row of Category 1 trees, (equivalent of one tree per 20 linear feet), must be placed in the area between the wall or fence and the commercial, business or industrial property. If such an alternative is being proposed, be sure to point this out when submitting the plans for review.
** Buffer widths may be reduced to five feet for properties abutting public streets within the Community Redevelopment Agency boundary. The buffer width may also be reduced to five feet when the property across the street has other than single family or duplex residential use if approved by the Community Development Director.

Requirements for landscape buffers around vehicular use areas may apply if the vehicular use area is adjacent to the perimeter. Utilize the requirement that is most restrictive.

Notes:

- Adjacent residential properties include both properties with residential use or those zoned for residential use.
- For properties with vehicular use areas adjacent to the perimeter of the property, use the more restrictive of the VUA buffer or the perimeter buffer requirement.

4.12 Non-vehicular use area landscaping

All open spaces *in excess* of the minimum required to meet the VUA buffer, interior VUA and perimeter buffer requirements are considered to be non-vehicular open space (NVOS). NVOS does not include water bodies or the portions of stormwater management areas designed to for water retention/detention. All NVOS must be covered with landscape materials and must contain at a minimum the following trees and shrubs:

Table 3. Non-Vehicular Use Area Landscaping Requirements

Percent of site non-vehicular open space	**Trees and shrubs required**
Less than 30	1 tree and 10 shrubs per 2,000 square feet
30 to 39	1 tree and 8 shrubs per 2,500 square feet
40 to 49	1 tree and 6 shrubs per 3,000 square feet

50 or more	1 tree and 6 shrubs per 3,500 square feet

Notes:

- Calculations for this requirement should not include the minimum landscape areas used for other requirements such as buffers or the calculations will double-count these areas creating an increase in planting requirements.
- Areas in excess of the minimum requirements used for VUA and perimeter buffer landscaping must be included in the non-VUA landscape area. Example: a 10-foot wide perimeter buffer is required but a 15-foot perimeter buffer is provided. The first 10-feet of the perimeter buffer are not included in the area calculation for non-VUA but the last five feet are included.

4.13 Landscaping for vacant residential properties

Residential zoned/used properties which are left vacant for 30 days or more must plant grass to cover any bare soil and existing trees and shrubs must be maintained in good condition. A maintenance plan must be submitted to and approved by the Community Development Department.

4.14 Landscaping for single-family and duplex lots

All new single-family and duplex lots, developed individually or as part of a larger development, shall meet the following landscape criteria:

- Trees, grass, shrubs, groundcover or other decorative landscape material shall cover all ground not covered by building or paving.
- A minimum of three trees of two different species and a total of 10 shrubs are required per residential lot of 8,000 square feet or less.
- An additional one tree and three shrubs shall be provided for each 3,000 square feet of lot area above 8,000 square feet, up to a maximum requirement of 10 trees and 30 shrubs.
- Two trees shall be required in the front of the lot unless site conditions do not provide for adequate space.
- Shrubs shall be used to screen mechanical equipment (such as air conditioning units) where possible
- Trees required in the subsection shall have a minimum overall height of 12 feet

Note: Landscaping used to fulfill these requirements may also be used to fulfill other landscape requirements. Example: a residential lot is situated on the outer edge of a new development. As part of the required perimeter buffer in this area, one tree is planted in the back yard of the lot. This tree counts toward the three trees required on each lot.

4.15 Landscaping for screening

Landscaping is required to help screen structures/infrastructure to soften the appearance of these features. The following screening requirements must be met on every property:

Table 4. Landscape Screening Requirements

Site feature	Requirement	Notes
Structures (all buildings)	a minimum of 20 percent of the front planted with shrubs at least two feet tall	The front of a structure includes any side facing a public right of way
Equipment (dumpsters, electrical transformers, etc. with the exception of fire hydrants)	must be screened on at least three sides by landscape material a minimum of 30 inches tall	Landscaping must not interfere with the normal operation of the equipment
Bus Shelters	must be screened on three sides with vegetation a minimum of two feet in height and one canopy tree a minimum of 10 feet in height	
Signs (freestanding)	require one shrub for every two linear feet on each side and groundcover at a minimum width of five feet	Plants should be designed and maintained so as not to block the sign

Note: Landscaping used to fulfill these requirements may also be used to fulfill other landscape requirements. Example: a proposed shopping center includes landscaping in the front of the building for screening. This landscaping directly abuts proposed parking areas and therefore may qualify both as landscape screening and vehicular use area landscaping.

4.16 Providing adequate site distance around landscaping

At points of intersection of streets (including entranceways), a "site triangle" must be provided through landscaping for visibility. The site triangle is calculated by starting at the point of intersection of the two roadways (at the edge of the pavement) and creating a line along each road (away from the intersection). Connect the ends of the line to form the triangle, as depicted in **Figure 6**. The length of the sides of the site triangle are dependent upon the property type. For all zoning districts except C-2, the site triangle line length is 30 feet. For C-2, the triangle line is 25 feet, which may be reduced to 15 feet upon the discretion of the Community Development Director.

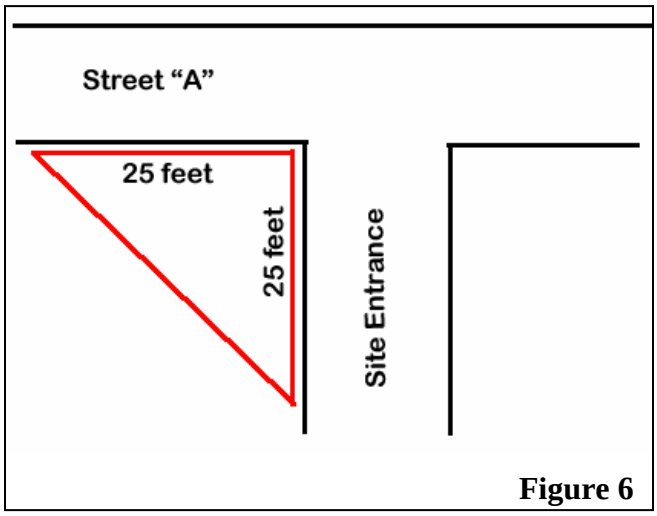


Figure 6

Within the site triangle, no landscaping may be installed or maintained above a height of 30 inches. Upon the discretion of the Community Development Director, tree trunks which do not impede visibility and have no branches or leaves below eight feet in height may be allowed within the site triangle.

4.17 Use of existing vegetation to meet landscape requirements

Existing landscaping, including trees, may be used to meet landscape requirements for new developments. However, invasive species, hazard trees and trees in poor condition may not be used to fulfill landscape requirements.

Note: Trees of poor quality may be retained on a property proposed for redevelopment. Though they may not be counted towards landscape requirements, retention of these trees will avoid the requirement to provide canopy replacement for their removal. Hazard trees and Category I invasive species must be removed for new developments requiring landscape plans.

4.18 Minimum tree size and spacing requirements

Consult the following table for information on size and spacing requirements for landscape material.

Table 5. Minimum tree size and spacing requirements

Landscape Component	Requirement Category	Landscape Requirement	Minimum Standard
Trees	Size	Shade tree	Category 1 tree, minimum of 14-foot height, diameter of 2 inches, 4.5 feet of clear trunk
		Intermediate tree	Category 1 or 2 tree, minimum of 12-foot height, diameter of two inches and four feet of clear trunk
		Small tree	Category 1, 2 or 3 tree and minimum overall height of 10 feet and minimum canopy spread of 4 feet, minimum trunk diameter of 1.5 inches and three feet of clear trunk
		Palm	Minimum 6 feet of grey wood
	Spacing from trees/structures	Shade tree	15 feet from structures, 20 feet from other shade trees
		Intermediate or small tree	8 feet from structures, 15 feet from other trees
		Palm	3 feet from structures, 3 feet from other palms, 10 feet from other trees
	Planting space	Shade tree	225 square feet with 15 feet as the smallest dimension (except when used in parking area peninsulas)
		Intermediate	90 square feet with 8 feet as the smallest dimension
		Small	64 square feet with 8 feet as the smallest dimension
		Single-stem palm with DBH >12 inches	25 square feet with 5 feet as the smallest dimension
		Clustering	9 square feet with 3 feet as the smallest

		palms/palms with DBH<12 inches	dimension

Note: Trees and palms in excess of the minimum landscape requirements may be spaced closer together than the required standards in the table above if they do not interfere with the growth of other trees

4.19 Plant size – distribution of shade, intermediate and small trees and palms

The City code contains provisions for the distribution of the size of trees required for landscape plantings. A minimum of 40 percent of the trees proposed to meet code requirements must be Shade trees.

Of the remaining 60 percent of landscape trees, no more than 30 percent can be Intermediate trees, no more than 10 percent can be small trees and no more than 20 percent can be palms.

Notes:

- For palms with a typical DBH at maturity of less than 12 inches, three palms are considered equal to one tree. Examples of these palms include *Phoenix roebelenii, Carpentaria acuminate and Acoelorraphe wrightii*.
- For palms with a typical DBH at maturity of 12 inches or greater, one palm is considered equal to one Category 2 tree. Examples of these palms include *Sabal palmetto*, *Roystonea elata* and *Phoenix dactylifera*.
- The number of palms should be converted to tree equivalents per the above standards for landscape calculations including the 20 percent maximum percentage of landscape trees.

Newly planted palms must have at least six feet of grey wood. No more than 20 percent of the total trees can be palms and three palms are required to replace one tree that is proposed for removal.

4.20 Shrub size and spacing

Shrubs proposed on a planting plan must be at least two feet tall. Within one year, shrubs being used as a hedge row should be continuous, full, and at least three feet tall. This means that the shrubs should be planted close enough to fill out as the plants grow. Planting at two feet on center is recommended but may be adjusted based on plant size and growth rate.

4.21 Plant material quality

The City of Dania Beach Standard Landscape Notes (**Appendix G**) contains landscape plant standards and must be included on each landscape plan.

In addition to including the standard landscape notes, each landscape plan should ensure the following planting standards are met:

- Plant materials must conform to the standards for Florida Number One, or better, as provided for in the most current edition of "Grades and Standards for Nursery Plants," Parts I and II, State of Florida Department of Agriculture and Consumer Services. A link to this document is provided in **Appendix D**.
- Shrubs shall be a minimum of two (2) feet in height when measured immediately after planting. When used as a hedge, shrubs shall be full to base, planted and maintained so as to form a continuous, unbroken solid, visible screen within a maximum of one (1) year after time of planting. When shrubs are used as a visual buffer around vehicular use areas, the height of solid shrubs at installation shall be measured as a minimum of two (2) feet above the vehicular use area pavement surface that directly abuts the shrubs and shall attain a height of three (3) feet within one (1) year.
- Vines shall be a minimum of thirty (30) inches in supported height immediately after planting, and may be used in conjunction with fences, visual screens or walls to meet landscape buffer requirements as specified
- Ground covers shall be planted with a minimum of fifty (50) percent coverage with one hundred (100) percent coverage occurring within six (6) months of installation.
- All turf areas shall be sodded using species suitable as permanent lawns in the City. In no case shall seeding be allowed as a method of producing turf coverage.
- All plant beds (excluding turf areas) shall be excavated to a minimum depth of twenty-four (24) inches and backfilled with a suitable soil consisting of fifty percent (50%) composted organic matter, well-mixed with native soil. Backfill material shall be free from rock, construction debris, or other extraneous material. Areas that are existing landscape areas and not proposed for regrading do not need to meet this requirement.
- A two-inch minimum thickness, after initial watering in, of approved organic mulch material shall be installed in all areas not covered by buildings, pavement, sod, preserved areas and annual flower beds. Each tree shall have a ring of organic mulch no less than twenty-four (24) inches beyond its trunk in all directions.
- All trees and palms planted as trees shall be securely guyed, braced and/or staked at the time of planting until established. The use of nails, wire,

rope, or other methods which damage the tree or palm are prohibited. All plants shall be installed with the top of the root ball even with the soil grade.

- A root barrier system shall be installed in situations where a tree or palm is planted within 10 feet of a sidewalk or parking area, unless other special provisions have been designed to accommodate tree roots.

Note: Any vegetation not living one year (or thereafter), after initial inspection and acceptance by the City, will be required to be replaced with equivalent vegetation

Specific best management practices that apply to the conditions of your site should be included on the landscape plan and implemented during construction. Some protection methods are listed below:

- Use retaining walls where needed to protect trees from grade changes. Do not pile soil or other materials on top of a tree's roots. Also, do not excavate and change the grade within the root zone of a tree.
- Install fences or like structures at least four feet in height that are conspicuously colored and prevent or obstruct passage into the tree protection zone.
- Do not stockpile materials or equipment under trees.
- Attachments to trees are not allowed, even if they are temporary.
- Excavations should not encroach within the tree protection zone.
- Pruning done before or after construction should be done according to ANSI A-300 standards. If a tree is damaged during construction, it must be repaired.
- Nothing should be stored under or discharged within the drip line of a tree.
- Driving routes should not come close to trees or drive over their roots. Routes should be chosen to avoid compaction of root zones.

5.0 TREE PRESERVATION, PLANTING AND INSPECTION

As stated in the standard landscape plan notes (**Appendix G**), a pre-construction meeting with the City Arborist is required prior to site clearing, planting or any other construction activities. This meeting must include the contractors conducting the site clearing and planting activities. If the planting contractor is not known at the time, a second meeting with the planting contractor must be held prior to planting.

The pre-construction meeting is very important as it can save valuable time and money for the applicant, preventing expensive replanting requirements or delays in issuing the certificate of occupancy.

A copy of the approved set of landscape plans, with any changes approved by the City indicated, must be present on the site at the pre-construction meeting and during all construction activities until the final landscape inspection is complete.

5.1 Tree preservation

During the plan review process, existing trees will be planned for preservation to the extent practicable. Landscape plans will include tree preservation measures such as root pruning, fencing and supplemental irrigation. Proper implementation of these practices will help to ensure that trees that have been carefully planned for preservation will remain healthy and viable. Trees that are damaged during construction will be required to be removed and replaced. Specimen trees that are damaged and must be removed will require payment of a specimen tree fee, based on the tree's value, into the City's Tree Fund.

Common Mistakes:

- Not installing tree protection fencing prior to site clearing
- Damaging tree branches or roots with equipment
- Storing materials or fill within tree protection zones
- Installing pavement or buildings without conducting required root pruning

5.2 Tree planting

Tree planting must conform to the landscape notes and details included on the approved landscape plan. All trees must be Florida Grade 1. Landscape planting should only occur once final construction activities have finished in a given area and no equipment will need to access the area. *Any* plant substitutions (size, species or locations) must be requested from and approved by the City *prior* to planting, or substitute plants may be rejected.

Common Mistakes:

- Failure to excavate and backfill plant beds prior to planting
- Substituting plants without prior approval
- Changing planting locations based on site conditions but without City approval
- Plantings failing to account for addition of topsoil/sod in the surrounding area, making them too low in the landscape
- Not planting according to approved details
- Not using Florida Grade 1 plants
- Installing plants prior to irrigation/not providing for temporary irrigation

5.3 Landscape inspection

Once landscaping has been installed for a given project, a final landscape inspection may be requested from the City. At the time of the final inspection, the applicant must have:

- A representative present on the project site.
- A copy of the approved landscape plans. Any previously approved changes to landscaping must be indicated on the landscape plans.
- A maintenance regime in place. A copy of the maintenance contract may be requested by the City landscape inspector.
- An irrigation system installed and operational. A demonstration of the irrigation system may be required.

At the discretion of the Director of Community Development, the City may accept a surety bond, cash bond or letter of credit equal to 100 percent of the cost of completion of outstanding landscaping requirements.

Landscape inspections may be conducted for a given phase of a project. However, all required landscaping for common areas, landscape buffers and street trees must be completed for the entire project prior to the issuance of 25 percent of the certificates of occupancy.

Common Mistakes:

- Undocumented variations from the approved landscape plan.
- Common areas not landscaped for phased approvals beyond 25 percent.

- Irrigation not operational at the time of inspection.
- Maintenance not occurring or detrimental maintenance (overpruning) occurring .
- Copy of approved landscape plans not available on the site.
- Dead plants or plants in poor condition that must be replaced prior to final approval

APPENDIX A

DEFINITIONS

DEFINITIONS

Official definitions are provided in the City of Dania Beach code. The following list includes the definitions contained within the code for easy reference. Additional definitions and further information pertaining to a specific definition may be included in this list as needed and identified by the City.

Access way: A private vehicular roadway intersecting a public right-of-way.

Applicant: The owner of the property or his legally authorized agent.

Balled and burped (B&B): Field-grown trees or shrubs with roots established in an earthen ball encompassing the root system necessary for the full recovery of the plant; wrapped and bound to support the root ball.

Berm: An earthen mound.

Breast height: A height of four and one-half (4 1/2) feet above natural grade.

Canopy coverage: The aerial extent of ground within the drip line of the tree.

Clear trunk: Point above the root ball along the vertical trunk of a tree at which lateral branching or fronds begin.

Clear wood (gray wood): That portion of the palm trunk which is mature, hard wood measured from the top of the root ball to the base of green terminal growth or fronds.

Condition: In reference to a tree, refers to the overall structure and health of the plant, taking into consideration form, pathogens, root structure, and apparent patterns of health over time. In general, condition is identified according to the following classifications:

> *Good: a tree with structural, pathogenic or other problems not apparent or apparent in a limited extent that will not compromise the long-term health of the tree.*
>
> *Fair: a tree with structural, pathogenic or other problems that have compromised the health of the plant, but either occurring to an extent insufficient to bring the tree into a state of decline, or that may effectively be treated and the tree restored to health using proper arboricultural practices.*
>
> *Poor: a tree with structural, pathogenic or other problems that have compromised the health of the plant enough to cause a state of decline in the tree or that cannot be effectively treated with proper arboricultural*

practices and are expected to continue to deteriorate the health of the tree over time.

Container grown: Plant material grown in a container of suitable size to allow adequate room for the healthy development of the root system.

Decline: In reference to the condition of a tree or palm, a state of worsening health or condition such that the tree or palm will likely die within two years.

Diameter breast height (DBH): The diameter of a tree trunk measured at four and one-half (4 1/2) feet above grade *measured in accordance with the most recent guidelines published by the US Forest Service.*

Drip line: A vertical line extending from the outermost branching of a tree or plant to the
ground.

Effectively destroyed: Means to cause, suffer, allow or permit any act which will cause a tree to die or to go into a period of unnatural decline within a period of one (1) year from the date of the act. Acts which may effectively destroy a tree include, but are not limited to, damage inflicted upon the root system by heavy machinery, excessive trimming, changing the natural grade above the root system or around the trunk, damage intentionally inflicted on the tree permitting infection or pest infestation, application of herbicides or other chemical agents or intentional fire damage to the tree permitting infection or pest infestation, the infliction of a trunk wound that is thirty (30) percent or greater of the circumference of the trunk, or the removal of sufficient canopy to cause the unnatural decline of the tree.

Equivalent replacement: A substitute for the tree which it replaces as determined by the director of community development, or his designee.

Equivalent value: A monetary amount reflecting the cost of vegetation to be replaced.

Gray wood: See "clear wood."

Ground cover: Low growing plants that, by nature of their growth characteristics, completely cover the ground and do not usually exceed two (2) feet in height.

Hazard tree: A tree or palm that has structural, pathogenic or other problems beyond the natural habit for the species, that poses an *imminent* threat to people or property due to imminent failure of a portion or the entire tree. A hazard tree must have a potential target (object in danger of damage). A tree may not be classified as a hazard solely by species or proximity to a target, a special potential for failure must be present. Trees with structural, pathogenic or other

problems that may be remedied using proper pruning, fertilization, pest control or other standard arboricultural practices are not considered hazardous trees.
Note: potential property damage from failure of a hazardous tree must be substantial compared to the value of replacement of the tree.

Hedge: An evenly spaced planting of shrubs which forms a compact, dense, visually opaque, living barrier.

Historical tree: A particular tree or group of trees, as approved by the city commission, which has historical value because of its unique relationship to the history of the region, state, nation or world.

Invasive plant species: Plant species that originated in other parts of the world and that have the potential to cause harm to native plant communities. Particular species are those identified as Category I or Category II invasive species on the current version of the Florida Exotic Pest Plant Council's Invasive Species List. The community development director may edit this list (for applicability for city requirements) including designating additional invasive species as necessary or if this publication is out of print.

Land clearing: The clearing of vegetation and soils for the purpose of land development activities. This includes, but is not limited to, construction for buildings, right of ways, utility easements or access, drainage ways, parking lots and other structures, rock mining, and agricultural activities that involve the removal of trees as defined by this section.

Landscaping:
(1) (When used as a noun) Living plant material such as, but not limited to turf, ground cover, shrubs, vines, trees or palms and non-living durable materials commonly used in environmental design such as, but not limited to, rocks, pebbles, sand, walls or fences and aesthetic grading and mounding: but excluding paving and structures.
(2) (When used as a verb) The process of installing or planting materials commonly used in environmental design.

Landscape irrigation: The outside watering of shrubs, trees, lawns, grass, ground covers, vines, gardens and other such flora, not intended for resale, which are planted and are situated in such diverse locations as residential and recreation areas, cemeteries, public, commercial and industrial establishments, and public medians and rights-of-way.

Micro-irrigation: The application of small quantities of water on or below the soil surface as drops or tiny streams of spray through emitters or applicators placed along a water delivery line. Microirrigation includes a number of methods or concepts such as bubblier, drip, trickle, mist or micro spray and subsurface irrigation.

Mulch: An organic material (arsenic-free) such as wood chips, pine straw or bark placed on the soil to reduce evaporation, prevent soil erosion, control weeds and enrich the soil.

Native plant species: Those identified as native to the geographic area (county or region as listed) in the *Guide to the Vascular Plants of Florida*, by Dr. Richard P. Wunderlin and Bruce F. Hansen, and as amended by the Association of Florida Native Nurseries.

Native topsoil: The uppermost layer of existing soil on an undisturbed ~~the~~ site, capable of supporting plant growth.

Offsite: For tree relocation and tree replacement, means any location in excess of one mile from the tree's original location.

Onsite: For tree relocation and tree replacement, means any location one (1) mile or less from the tree's original location.

Overall height: The measurement of a plant from the top of the root ball at the soil line to the tip of the uppermost part of the plant.

Owner-occupied: A dwelling in a habitable condition occupied by the owner of record, as the owner's primary residence, and holding a valid certificate of occupancy.

Planting soil: A medium composed of naturally occurring mineral particles and organic matter, which provides the physical, chemical and biological properties necessary for plant growth.

Potable water: Water that is suitable for drinking, culinary, or domestic purposes.

Protective barrier: Fences or like structures at least four (4) feet in height that are conspicuously colored and prevent or obstruct passage.

Shrub: A woody plant with typically more than one stem produced from the base which naturally grows to or is maintained in a healthy state at a maximum overall height of twenty (20) feet, with no single stem achieving a DBH of 2 ½ inches or greater.

Site specific plant material: The use of the best adapted plant species to minimize
supplemental irrigation, fertilization and necessary pest control.

Sod: See "turf".

Special status category tree: Any tree or group of trees that occur in any of the following areas as designated in Section 26-24:
(1) Native forested community,
(2) Local area of particular concern,
(3) Natural resource area,
(4) Urban wilderness area,
(5) Specimen trees are also included within this designation.

Specimen tree: Any hardwood or conifer tree which has a DBH of eighteen (18) inches or greater, and any palm tree which has a minimum of six (6) feet of clear wood and a DBH of twelve (12) inches or greater.
The following trees are not specimen trees:
(1) Fruit trees that are cultivated or grown for the specific
purpose of producing edible fruit for commercial sale;
(2) Species of the genus ficus provided however, the following trees may be considered specimen trees: *F. aurea* (strangler fig), *F. laevigata* (short leaf fig), *F. rubiginosa* (rusty fig or rust leaf fig), *F. jacquinifolia*;
(3) Paurotis palm (*Acoelorraphe wrightii*), the Phoenix palm (*Phoenix reclinata*), and all other clustering palms;
(4) Species identified as Category I or Category II invasive species on the most recent version of the Florida Exotic Pest Plant Council's Invasive Species List; and
(5) Trees and palms that are dead, in poor condition or are considered a hazard.

Tree: Any living, self-supporting, gymnosperm (conifer) or dicotyledonous (broadleaf) woody perennial plant which has a DBH of no less than two and one-half (2 1/2) inches and normally grows to an overall height of no less than fifteen (15) feet in southeast Florida.

For general purposes and when not specifically stated otherwise, the term tree applies both to plants meeting the preceding definition and to palm trees, as defined separately in this section. However, various sections of the city code may have differing requirements and allowed uses of trees and palm trees.

Tree, intermediate: A tree which naturally develops an average height of a minimum of twenty (20) feet, as characteristic of the species.

Tree canopy: The upper portion of the tree consisting of limbs, branches, and leaves.

Tree, palm: A monocotyledonous tree-like plant having fronds with parallel venation and no true woody bark with a minimum overall natural height of fifteen (15) feet at maturity.

Tree, shade/canopy: A tree, which by virtue of its natural shape, provides at maturity a

minimum shade canopy averaging forty (40) feet in diameter and forty (40) feet in height.

Tree, small: A tree which naturally develops an average maximum height of twenty (20) feet as a characteristics of the species.

Tree, standard: A wood perennial plant with one stem which has been turned into an upright, small, tree-like form.

Tree protection zone: the greater area of the drip line or the default protection zone as follows, unless a tree protection zone has been designated on an approved landscape plan. The default tree protection zone encompasses the trunk of the tree and extends to a radius of five (5) feet for palms, eight (8) feet for trees with a DBH of 2.5 inches to eighteen (18) inches and fifteen (15) feet for trees with a DBH of greater than 18 inches.

Tree survey: A document pertaining to a particular property or group of properties meeting the requirements of 21-HH F.A.C., and must provide, at a minimum, the following information:
(1) The location plotted by accurate techniques, of all existing trees within the property boundaries and 15 feet outside of the property boundaries;
(2) The common and scientific name of each tree;
(3) The DBH of each tree, or if a multiple trunk tree,
(4) Canopy coverage in square feet
(5) Condition of the tree (Good, Fair, Poor or Dead)
(6) Appraised value (for specimen trees)
(7) Proposed disposition (Remain, Remove, Relocate)

Turf (sod): Upper layer of soil bound by grassy plant roots and covered by viable grass blades.

Vehicular encroachment: Any portion of a motor vehicle outside of the boundaries of a vehicular use area that protrudes into a landscape area.

Vines: Any plant with a long, slender stem that trails or creeps on the ground or climbs by itself on a support.

Xeriscape: A landscaping method that minimizes the need for irrigation by the use of site-appropriate plants and an efficient watering system.

APPENDIX B

APPLICATION FORMS AND INSTRUCTIONS

Instructions for the City of Dania Beach
Tree Removal License Application

A Tree Removal License is required for the removal of trees on all properties within the City.

The City of Dania Beach regulates trees (including large shrubs) with a trunk a minimum of 2.5 inches in diameter (at chest level) and 10 feet tall.

To apply for a Tree Removal License, the items in the list below must be submitted. In addition, City staff may require further information should it be deemed necessary or appropriate to complete their review.

- Complete and notarized City of Dania Beach Tree Removal License Application, directions to the property, and a site plan showing buildings, pavement and trees proposed for removal or relocation. For removal or relocation of six or more trees, trees must be located by a Florida Licensed Professional Land Surveyor or by using sub-meter global positioning system (GPS) equipment.
- A non-refundable $100.00 application fee (required for each application). The fee may be submitted after the application is reviewed by the City, but must be paid prior to the permit being issued.
- A $10 per tree additional fee. This fee is required for each tree proposed for removal or relocation with the following exceptions: exotic/ invasive trees or dead trees. A list of exotic/invasive species is provided by the Florida Exotic Pest Plant Council at: http://www.fleppc.org.
- Total area of the canopy, in square feet, for trees you are proposing to remove. An arborist can help you determine the tree canopy, or the City Arborist will provide this measurement if you do not provide it in your application. On-site plantings, off-site plantings or fee-in lieu payment (2.7 times the cost of required plantings) will be required to replace the lost canopy.
- The locations and species of trees you are proposing to plant to replace the canopy of trees you are proposing to remove. A list of recommended species is included on page 2 of these instructions, along with the square feet of canopy credit you will receive for planting them. If you do not provide species and/or locations of replacement trees, the City Arborist will provide recommended species and planting locations when the License is issued.
- The value of specimen trees proposed for removal. Removal of specimen trees requires a fee based on the tree's value, in addition to canopy replacement requirements. The criteria for determining if a tree is a specimen is provided on page 2. An arborist can determine the value of specimen trees, or the City Arborist will provide a value if you do not propose one in your application.

Tree Removal Licenses are typically evaluated within one week of receipt of the application. If the application meets the requirements of the City's Code, the License will be approved once the fee is paid. If additional information or changes to proposed activities are required, the City Arborist will provide the Applicant/Applicant's Authorized Agent with comments to be addressed prior to issuance of the License.

Tips for Getting Your Application Processed Quickly and Avoiding Common Mistakes

- Include the Applicant or Applicant's Agent's email address to receive comments by email.
- If the person who is managing the property is not the property owner (this includes property managers for homeowner associations and residential renters), the property owner must sign the application and may then identify the property manager as the Applicant's agent.
- State why you want to remove or relocate the trees. This will help in the review and will assist the City Arborist in recommending replacement trees.
- Use an International Society of Arboriculture (ISA) Certified Arborist whenever possible, especially for projects involving six trees or more, or any specimen trees. For a listing of Certified Arborists in the area, visit http://www.treesaregood.com.
- Questions? Call the City at **954-924-6805**, or email the City Arborist at: mmccoy@esciencesinc.com

Specimen Tree Criteria

The following are considered by the City to be Specimen Trees (*except for exotic/invasive species*):

Species	Diameter	Species	Diameter	Species	Diameter
Live Oak	≥ 12 inches	Laurel Oak	≥ 12 inches	Other hardwoods/conifers	≥ 18 inches
Royal Palm	≥ 10 inches	Canary Island Date Palm	≥ 10 inches	Other palms	≥ 18 inches

The value of specimen trees should be provided using the most recent version of the Guide for Plant Appraisal, published by the ISA. Dead and hazardous trees will have a value of $0. Payment for removal of specimen trees is required in addition to planting/paying for canopy replacement trees.

Replacement Trees

A Tree Removal License will require the licensee to replace the entire removed canopy, as measured in square feet, with new trees. Replacement trees are given a canopy area value in square feet based on the species' typical canopy size. Even dead or invasive trees have a canopy area that must be replaced.

Replacement Category	**Canopy Credit (square feet)**	**Replacement Category**	**Canopy Credit (square feet)**
Category 1	300	Category 3	100
Category 2	150	Category 4	50

If you cannot replace trees on-site, off-site planting or equivalent fee in lieu payment must be made.

Recommended Trees & Palms: For more recommendations, consult an ISA Certified Arborist or the City Arborist.

Category 1

Gumbo limbo	(*Bursera simaruba*)
Mahogany	(*Swietenia mahogoni*)
Indian tamarind	(*Tamarindus indica*)
Live oak	(*Quercus virginiana*)
Paradise tree	(*Simarouba glauca*)
Red maple	(*Acer rubrum*)
Pitch apple	(*Clusia rosea*)
Golden rain tree	(*Cassia fistula*)

Category 2

Buttonwood	(*Conocarpus erectus*)
Dahoon holly	(*Ilex cassine*)
Jamaica dogwood	(*Piscidia piscipula*)
Lancewood	(*Nectandra coriacea*)
Persimmon	(*Diospyros virginiana*)
Pigeon plum	(*Coccoloba diversifolia*)
Pink trumpet tree	(*Tabebuia heterophylla*)
Sweet bay	(*Magnolia virginiana*)
Wild tamarind	(*Lysiloma latisiliquum*)

Category 3

Black ironwood	(*Krugiodendron ferreum*)
Cabbage palm	(*Sabal palmetto*)
Coconut palm	(*Cocos nucifera*)
Geiger tree	(*Cordia sebestena*)
Red stopper	(*Eugenia confusa*)
Wax myrtle	(*Myrica cerifera*)
White geiger	(*Cordia boissieri*)

Category 4

Florida silver palm	(*Coccothrinax argentata*)
Florida thatch palm	(*Thrinax radiata*)
Paurotis palm	(*Acoelorrhaphe wrightii*)
Bottle palm	(*Hyophorbe lagenicaulis*)
Date palm	(*Phoenix dactylifera*)

Calculating your License Fee:

$100 (application fee)
+$10 (per tree)
+Fee in-lieu payment for replacement trees that cannot be provided (= replacement tree price x 2.7)
+Value of specimen trees removed. (The cost of trees used to replace the canopy of specimen trees may be removed from the specimen tree value).

City of Dania Beach

Tree Removal License Application

100 West Dania Beach Boulevard
Dania Beach, FL 33004
(954) 924-3651 or (954) 924-3652

Date: _____

Permit # _____

Folio # _____

1. **APPLICANT'S NAME AND ADDRESS:**

   Name _____

   Address _____ City_____ State _____ Zip _____

   Phone ( ) _____ Fax ( ) _____ Email _____

2. **APPLICANT'S AUTHORIZED AGENT FOR LICENSE APPLICATION COORDINATION:**
   All applications other than owner-occupied single family or duplex homes must list a contractor registered with the City of Dania Beach Community Development Department
   Name _____

   Address _____ City_____ State _____ Zip _____

   Phone ( ) _____ Fax ( ) _____ Email _____

3. **LOCATION WHERE PROPOSED ACTIVITY EXISTS OR WILL TAKE PLACE:**

   Address or Descriptive Location: _____

   Parcel/Folio Number _____ Subdivision Name _____

   Land Use _____ Zoning _____ Property Platted? _____

4. **PRESENT USE OF SUBJECT PROPERTY:** _____

5. **PROPOSED USE OF SUBJECT PROPERTY:** _____

6. **DESCRIPTION OF PROJECT (attach additional sheets if necessary):**

   Total number of trees proposed to be removed: _____ Code compliance case number (if applicable)_____

   Total number of trees proposed to be relocated: _____

   Please attach a detailed list describing species and diameter breast height for each tree proposed to be removed or relocated.

7. **PROPOSED COMMENCEMENT DATE:** _____ **COMPLETION DATE:** _____

8. **Attach any additional remarks on a separate sheet.**

   Attach map/aerial showing size and location of the site.

   Attach certified tree survey (required for removal/relocation of six or more trees) and site plan designating trees to be preserved, relocated or removed.

9. **AFFIDAVIT OF OWNERSHIP OR CONTROL OF THE PROPERTY FROM WHICH THE PROPOSED TREE REMOVAL IS TO BE UNDERTAKEN:**

   I CERTIFY THAT (please check the appropriate space):

   - ❑ I am the fee simple title owner of the subject property.
   - ❑ I am a lessee, optionee, contract purchaser, or agent of the owner of the property (attach certified owner authorization for the proposed work and lease option to purchase or sale contract).
   - ❑ I am the record easement owner of the subject property and the proposed tree removal is consistent with the use granted by the easement and showing the location of the easement).
   - ❑ I authorize the agent listed in Item #10 below to negotiate modifications or revisions when necessary, and accept or assent to any stipulations on my behalf.

   _____ _____ _____
   Print Name of Applicant Signature of Applicant Date

   SWORN TO AND SUBSCRIBED before me this _____ day of _____, 20 _____, by _____, who is personally known to me or who produced _____ as identification, and who did (or did not) take an Oath._____

   My Commission Expires: Notary Public _____

10. AFFIDAVIT OF AGENT:

A) I understand I may have to provide additional information/data that may be necessary to show that the proposed project will comply with Article II titled Tree Preservation, of the City of Dania Code of Ordinances.

B) Further, I hereby acknowledge the obligation and responsibility for obtaining all of the required State, Federal, or County permits before commencement of construction activities.

C) Contractor must complete: Broward County Tree Trimmers License # _____ Expiration Date: _____

I hereby certify that I am familiar with the information contained in the application, and that to the best of my knowledge and belief, such information is true, complete and accurate. I further certify that I possess the authority to undertake the proposed activities.

_____ _____ _____

Print Name of Agent Signature of Agent Date

SWORN TO AND SUBSCRIBED before me this _____ day of _____, 20 _____, by _____, who is personally known to me or who produced _____ as identification, and who did (or did not) take an Oath.

My Commission Expires: _____

Notary Public

DIRECTIONS TO PROPERTY:

_____

_____

_____

SITE: (Drawing should approximate location of the tree or trees to be removed)

REASON FOR REMOVAL:

_____

_____

_____

Attach application fee of $20. A per-tree removal fee of $50 will be assessed at the time of issuance of the permit.

Make check pay able to Cityof Dania Beach.

to

FOR OFFICE USE ONLY

Inspection Date: _____ Inspector: _____

License: approved___denied___ Valid until: _____

Trees authorized for removal: _____

Trees required for replacement: _____

Tree Removal Fee: _____ Fee explanation: _____

Notes: _____

Application Approved By: _____ **Date:** _____

City of Dania Beach

Tree Removal General License Use Notice

100 West Dania Beach Boulevard
Dania Beach, FL 33004
(954) 924-6805

Submit a minimum of 15 days prior to proposed activities to the City of Dania Beach Community Development Department at the address above

1. Applicant's Name and Address:

   Name _____

   Address_____ City_____ State_____ Zip _____

   Phone_____ Fax_____ Email_____

2. Location of Proposed Activities

   Address or description of location _____

   _____

3. General License Applied for: (check all that apply)
   - ☐ 1. Removal of a tree within wetlands, authorized by a Broward County Environrmental Resource License (a copy of the license must be attached)
   - ☐ 2. Removal of a hazard tree (must include one-to-one replacement)
   - ☐ 3. Tree clearing during emergency conditions by government agency
   - ☐ 4. Tree clearing during emergency conditions by private entities (requires prior authorization from City Manager)
   - ☐ 5. Removal of trees from owner occupied single-family or duplex properties of 1 acre or less (does not include specimen or other special status trees, required replacement trees and trees covered by a site plan)
   - ☐ 6. Removal of trees by a franchised utility within a utility easement (does not include specimen or other special status trees)
   - ☐ 7. Removal of trees by a water management or improvement district within a maintenance easement (does not include specimen or other special status trees)
   - ☐ 8. Removal of trees by FDOT or Broward County within roadway right of way (does not include specimen or other special status trees)
   - ☐ 9. Removal of invasive tree species

4. Description of activity. Include number, size and species of trees to be removed, locations of trees proposed for removal. Attach additional sheets as needed.

5. Description of replacement tree planting activities including species, sizes, numbers and location

6. Proposed activity date(s):

7. Affidavit of ownership:
   I certify that I am the fee simple title owner, lessee, agent of the owner or record easement owner of the property where the activities proposed by this application will occur.

_____ _____

Printed name of applicant Signature of Applicant

LANDSCAPE MAINTENANCE AGREEMENT

This Landscape Maintenance Agreement is entered into this _____day of _____, 2008 by and between _____

_____

Phone #_____

Owner, First Party (hereinafter called "Owner") and the City of Dania Beach, a municipal Corporation organized under the laws of the State of Florida, Second Party, (hereinafter called "City).

WHEREAS, the City is the owner of the public right-of-way adjacent to Owner's property located at _____: and

WHEREAS, Owner is desirous of participating in the program;

NOW, THEREFORE, the Parties do agree as follows:

1. The City will cause to be planted _____ tree(s) in the City right-of-way adjacent to the Owner's property located at _____

2. The Owner will water the trees regularly, at least daily, until they are established, and then regularly on a continuous basis as needed. The Owner will properly fertilize and maintain the trees.

3. The ownership of the trees will be assigned to the Owner.

4. This agreement shall be binding on the City and the Owner, Owner's successors, transferees and assigns.

IN WITNESS WHEREOF, the Parties have hereunto set their hands and seals the day and year first above written.

Witnesses:

_____

_____

Owner:

By _____

CITY OF DANIA BEACH

By: _____
Mayor

Attest: _____
City Clerk

STATE OF FLORIDA
COUNTY OF BROWARD

The foregoing instrument was acknowledged before me this ___ day of _____, 2008 By _____, as owner of _____, who is personally known to me, or, if not, produced the following form of identification: _____.

Notary Public

Sign: _____
Print: _____

My Commission expires:
My Commission number:

STATE OF FLORIDA
COUNTY OF BROWARD

The foregoing instrument was acknowledged before me this ___ day of _____, 2008 By: **Albert Jones** and **Louise Stilson**, as **Mayor** and **City Clerk** of **the City of Dania Beach** who are personally known to me, or, if not, produced the following form of identification: _____

Notary Public

Sign: _____
Print: _____

My Commission expires:
My Commission number:

APPENDIX C

LOCAL LANDSCAPE PROFESSIONALS

City of Dania Beach Local Area Tree Suppliers

The City of Dania Beach makes no warranty or recommendation of the parties appearing on this list. This list is being provided as a general reference only.

If you own or manage a tree supply company, are willing to service the Dania Beach area and would like your name included on this list, please contact the City Landscape Consultant Michael McCoy at mmccoy@esciencesinc.com

Dania Farms Inc
704 N Federal Hwy
Dania, FL 33004

De La Flor Gardens
16650 Griffin Rd
Southwest Ranches, FL 33331

Living Color Garden Center
3691 Griffin Rd
Fort Lauderdale, FL 33312

Landscape Solutions
668 NE 44th St
Oakland Park, FL 33334

Mitchell Q Landscape And Nursery
2816 W Sunrise Blvd
Fort Lauderdale, FL 33311

APPENDIX D

RELATED RESOURCES

Landscape References and Resources

Grades and Standards

Halfway down the page of Florida's Division of Plant Industry's publication page is the complete set of Grades and Standards for Nursery Stock documents
http://www.doacs.state.fl.us/pi/pubs.html

Invasive Species

The Florida Exotic Pest Plan Council publishes and yearly updates a list of invasive species in Florida.
http://www.fleppc.org/list/list.htm

Species Selection Tools

The University of Florida has a tree selection tool that allows you to select trees for your area based on a wide variety of characteristics.
http://orb.at.ufl.edu/FloridaTrees/index.html

Florida-Friendly Landscaping has several tools designed to help you choose the right species and design a landscape that is easy to maintain and easy on the environment.
http://www.floridayards.org/

Florida Power and Light has developed guidance for planting under and near power lines entitled "Right Tree, Right Place."
http://www.fpl.com/residential/trees/right_tree_right_place.shtml

The Institute for Regional Conservation's Natives for Your Neighborhood provides a list of appropriate native species for your area.
http://regionalconservation.org/beta/nfyn/default.asp

Tree Care Companies

The Tree Care Industry Association's (TCIA) website has a search mechanism on their home page that helps you find a tree care company by zip code or name.
http://www.tcia.org/index.aspx

The International Society of Arboriculture's website has a tool for locating arborists in your area.
http://www.treesaregood.com/findtreeservices/TCSHome.aspx

Tree Care Standards

The American National Standards Institute (ANSI), together with the Tree Care Industry Association (TCIA) published a variety of standards for tree care operations. The standards may be purchased from the TCIA on their website.
http://www.tcia.org/code/gov_standards_a300.htm

Tree Planting

The University of Florida has published the following guides to aid in tree planting:

Steps to Planting a Tree
http://hort.ifas.ufl.edu/woody/summaryplanting.html

Planting Trees in Landscapes
http://hort.ifas.ufl.edu/woody/planting.html

Tree Pruning

The University of Florida has published guidance to aid in proper tree pruning:
http://hort.ifas.ufl.edu/woody/pruning.html

Xeriscaping

A variety of organizations have published guidance information on xeriscaping in an effort to encourage homeowners and property managers to reduce irrigation needs for their properties. The following resources offer practical guidance on using xeriscaping on your property.

University of Florida's Xeriscaping page
http://livinggreen.ifas.ufl.edu/landscaping/xeriscaping.html

South Florida Water Management District's Xeriscaping flier
https://my.sfwmd.gov/pls/portal/docs/PAGE/COMMON/PDF/SPLASH/SPLXERIS.PDF

South Florida Water Management District’s guide to plant selection for Xeriscaping
https://my.sfwmd.gov/pls/portal/PORTAL.wwv_media.show?p_id=10518714&p_settingssetid=927145&p_settingssiteid=0&p_siteid=2434&p_type=basetext&p_textid=10519735

APPENDIX E

TREE TABLES

Existing Tree Table

Site Name:

Tree #	Common Name	Scientific Name	DBH (inches)	Canopy Cover (SF)	Condition (Good/Fair/ Poor)	Specimen Tree (Yes/No)	$ Value (if specimen)	Disposition (remain, remove, relocate)	Notes
1	live oak	Quercus virginiana	18	300	Good	yes	364.5	remove	

Tree Appraisal List (trunk formula method)

Site name: 0

Tree #	Species	Species Rating	Condition from Tree Table	Condition %	DBH (inches)	Site	Contribution	Placement	Location Score	Replacement Tree Size (DBH)	Replacement Tree Trunk Area	Replacement Tree Base Cost	Replacement Tree Total Cost (Installed)	Unit Tree Cost	Appraised Trunk Area	Appraised Trunk Increase	Basic Tree Cost	Appraised Value
1	Quercus virginiana	100%	Good	100%	18	10%	20%	20%	17%	2	3.14	$10	$ 27	$9	254.34	251.2	$2,187	$365
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Species Rating Reference Table for selected common specimen tree species, City of Dania Beach

Species Name	Rating	
Quercus virginiana	100	Native species with very good wind resistance, no known pest/disease problems of consequence
Bursera simaruba	100	
Sabal palmetto	100	
Roystonea elata	100	
Conocarpus erectus	100	
Ilex cassine	100	
Taxodium distichum	100	
Coccoloba diversifolia	100	
Lysiloma latisiliqua	100	
Clusia rosea	100	
Chrysophyllum oliviforme	100	
Acer rubrum	90	Native/naturalized species, good except minor defect ex. Less than ideal wind resistance, occasional pest issues
Tamarindus indica	90	
Pinus elliotti	90	
Quercus laurifolia	90	
Simaruba glauca	90	
Phoenix canariensis	90	
Chorisia speciosa	90	
Lagerstroemia indica	90	
Lagerstroemia speciosa	90	
Magnolia grandiflora	90	
Bismarckia nobilis	90	
Delonix regia	80	Defect slightly more pronounced than above
Swietenia mahogani	80	
Tabebuia heterophylla	80	
Magnolia virginiana	80	
Simaruba glauca	70	some wind resitance problems or other problems that prohibits significant use/lifespan, overall good form/health, nc
Ficus aurea	70	
Senna fistula	70	
Ficus citrifolia	70	
Bucida buceras	50	Noted structural or pest problems
Jacaranda mimosifolia	50	
Tabebuia caraiba	50	
Ficus benjamina	50	
Ficus bengalensis	50	
Melaleuca quinquenervia	0	Invasive species
Washingtonia robusta	0	
Calophyllum antillanum	0	
Acacia auriculiformis	0	
Bichofia javanica	0	
Casuarina equisetifolia	0	
Casuarina glauca	0	
Ficus microcarpa	0	
Schefflera actinophylla	0	
Schinus terebinthifolius	0	
Ficus altissima	0	
Syagrus romanzoffiana	0	

Replacement Category	Canopy Credit
Category 1	300
Category 2	150
Category 3	100
Category 4	50

Replacement tree price	Multiplier	Fee in-lieu payment amount
	2.7	0

APPENDIX F

DANIA BEACH RECOMMENDED TREES

Common name	Botanical name	Category	Native?	Abutting utility lines	Adjacent to Utility Lines (within 10-20 ft)	Street Tree	Parking Lot median/ island	Shade Tree	Screen/ buffer	Landscape Focal Point	Adjacent to/Between Buildings	Small Space/Garden/ Accent	Wet Areas/Pond & swale edges
African mahogany	Khaya spp.	1											
Alexandra palm	Archontophoenix alexandrae				x								
Areca palm	Chrisalidocarpus lutescens		N	x	x				x				
Bald cypress	Taxodium distichum	1	Y		x				x				x
Bamboo palm	Chamadorea spp.			x	x								
Bismark palm	Bismarkia nobilis		N		x	x				x			
Blue Latania	Latania loddigesii				x								
Bottle palm	hyophrobe verschaffeltii		N	x	x					x	x	x	
Canary Island date palm	Phoenix canariensis		N		x	x				x			
Cat palm	Chamadorea cataractarum			x	x								
Chinese fan palm	Livistonia chinensis				x								
Coconut palm	Cocos nucifera		N		x					x			
Crape myrtle	Lagerstroemia indica		N	x	x		x		x	x		x	
Date palm	Phoenix dactylifera		N		x	x				x			
Dwarf palmetto	sabal minor		Y	x	x				x	x	x	x	
Dwarf poinciana	Caesalpinia spp.			x	x								
European fan palm	Chamaerops humilis			x	x								
Fishtail palm	Caryota mitis		N		x								
Flame bottle tree	Brachychiton acerifolius	1											
Floss silk tree		1											
Frangipani	Plumeria rubra		N	x	x					x		x	
Glaucus cassia	Senna surattensis		N	x	x	x			x	x		x	
Golden rain tree		1											
Golden shower tree		1											
Green buttonwood	Conocarpus erectus	1	Y			x	x	x	x				x
Gumbo limbo	Bursera simaruba	1	Y			x	x	x					
Hurricane palm	Dictyosperma album				x								
Indian tamarind	Tamarindus indica	1	N			x	x		x				
Jaboticaba	Myrciaria caulifolia			x									
Jacaranda		1											
Jamaica thatch palm			Y	x									
Jatropha	Jatropha			x									
Kapok tree		1											
Key thatch palm			Y	x									
Kopsia	Ochrosia elliptica			x									
Lady palm	Rhapis excelsa			x									
Laurel oak	Quercus laurifolia	1	Y			x		x					
Lignum vitae	Guaiacum sanctum		Y	x									
Ligustrum	Ligustrum spp.		N	x	x				x	x		x	
Live oak	Quercus virginiana	1	Y			x	x	x					
Loquat	Eriobotrya japonica			x									
MacArthur palm	Ptychosperma macarthuri				x								
Mahogany		1	Y										
Majesty palm	Ravenea glauca			x									
Mastic		1	Y										
Needle palm	Rhapidophylium hystrix		Y	x									
Oleander	Nerium oleander			x									
Orange geiger	Cordia sebestena		Y	x	x		x			x		x	
Orange jasmine	Murraya paniculata			x									
Paradise tree	Simaruba glauca	1	Y			x	x	x	x				
Paurotis palm	Acoelorrhaphe wrightii		Y		x				x	x	x		x
Pindo palm	Butia capitata			x									
Pitch apple		1	Y										
Pond cypress		1	Y										
Pongam		1											
Pygmy date palm	Phoenix roebellini		N	x	x					x	x	x	
Red bay		1	Y										
Red maple		1	Y			x	x	x					x
Red mulberry		1	Y										
Red silk cotton tree		1											
Red stopper			Y	x									
Royal palm	Roystonea regia		Y		x								
Royal poinciana		1											
Sabal palm	Sabal palmetto		Y		x								
Sea grape		1	Y										
Senegal island date palm	Phoenix reclinata				x								
Silver buttonwood	conocarpus erectus, var. sereceus		Y	x									
Silver palm	coccothrinax argentata		Y	x									
Simspon's stopper			Y	x									
Slash pine	Pinus elliottii	1	Y			x	x		x		x		
Soapberry	Sapindus sapaonaria	1	Y										
Southern magnolia	Magnolia grandiflora	1	Y			x		x	x		x		
Spanish stopper			Y	x									
Sugarberry	Celtis laevigata	1	Y										
Sweet acacia	Acacia famesiana		Y	x									
Sweetbay	Magnolia virginiana	1	Y										
Triangle palm	Neodypsis decaryi				x								
Wax myrtle	Myrica cerifera		Y	x									
White geiger	Cordia boissieri			x									
White stopper			Y	x									
Wild tamarind	Lysiloma latisiliqua	1	Y			x	x		x			x	
Willow bustic	Dipholis salicifolia	1	Y										
Yellow elder	Tecoma stans			x									
Yellow poinciana	Peltophorum pterocarpum	1											

APPENDIX G

STANDARD LANDSCAPE NOTES AND DETAILS

City of Dania Beach Standard Landscape Plan Notes

1. A pre-construction meeting with the Dania Beach City Arborist is required prior to landscaping activities including removal of trees and/or installation of plant material. Call 954-924-0423 a minimum of 5 days prior to desired start date to schedule pre-construction meeting.
2. All existing trees proposed to remain are to be separated from the limits of disturbance of the construction area by tree protection fencing and signage. The tree protection fencing shall be located at the edge of the tree protection zone as depicted on the plan or at the edge of the drip-line(s) if a tree protection zone is not designated. No material storage or construction access is permitted within the tree protection zone.
3. All existing trees shall be pruned to ANSI A-300 standards to correct potential hazards.
4. A tree removal permit is required prior to removal or relocation of any tree or palm. Contact the Dania Beach City Arborist at 954-924-6805 to obtain permit information.
5. Landscape contractor shall notify Sunshine One Call of Florida, Inc. at 1-800-432-4770 a minimum of 2 full business days prior to digging. Landscape contractor is responsible for avoiding damage to utilities from plant installation.
6. Tree relocations:
    a. Existing trees to be relocated shall be root pruned a minimum of 120 days prior to relocation
    b. Minimum root ball sizes shall be in accordance with ANSI standards as follows:

Caliper	Minimum Root Ball Diameter
1	16
2	24
3	32
4	42
5	54
6	60
7	70
8	80
> 8	12 inches per inch of trunk diameter

    Transplanted trees with undersized root balls may be rejected by the City Arborist and replacement trees may be required.
    c. A temporary irrigation system shall be provided during and for the first 40 days after root pruning.
7. All planting must follow planting specifications and details shown on the plan.
8. Substitutions of plant species or specifications must be approved in writing by the Dania Beach City Arborist prior to use.
9. All plant material planted per this landscape plan shall be Florida Grade #1 or better, as specified in the current edition of the Florida Department of

Agriculture's Grades and Standards for Nursery Plants. Damaged plant material shall be rejected and replaced prior to installation.

10. All sizes shown for plant material are to be considered minimums.
11. Where quantities and/or species differ between the planting plans and plant lists, the plans shall take precedence
12. All new plant material shall be warranted by the landscape contractor for a minimum period of one year.
    The warrantee period shall begin after acceptance of the plants by the City Arborist.
13. All plant beds to be treated with pre-emergent herbicide prior to planting.
14. All tree and palm staking and support shall be removed one year after installation.
15. No fertilizer shall be applied to newly planted trees and palms.
16. All landscape material shall be thoroughly watered at the time of planting, no dry planting permitted.
17. Landscape contractor shall be responsible for providing temporary water provisions until such time as the irrigation system is operational.
18. All wire guys and/or fabric straps shall be flagged with florescent colored tape.
19. Mulching:
    a. All landscape areas not covered by sod shall be covered by a minimum 3-inch layer of mulch.
    b. A mulch ring with a minimum radius of 24 inches (48 inch diameter), is required around all newly installed trees and palms.
    c. Cypress mulch shall not be used.
20. All new landscaped areas shall be excavated down to a depth of 24 inches below final grade and back filled with clean debris-free soil. Construction access shall be restricted from the landscape area after excavation and backfill is complete.
21. All landscape areas shall be finish graded such that they are a minimum of 3.5 inches below surrounding paved surfaces so as not to impede the flow of drainage into landscaped areas and to allow for a 3-inch mulch layer.